

CEREAL RUST BULLETIN

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From:

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The winter-sown small grain crop is generally in good condition. In Oklahoma and Kansas, wheat development is slightly ahead of normal and the majority of the crop is in good shape, except for some freeze damage from north central Texas to central Kansas that occurred April 12 and 13. In central Kansas, freeze damage was variable. In some fields, 40% losses are expected, while in others only trace losses are expected depending on the crop maturity at the time of the freeze. At this time, it still is too early to determine the full effect of the freeze. In most of the southeastern soft red winter wheat area, the crop is in good shape. Throughout the spring grain-growing area, the cold temperatures and scattered precipitation have delayed field work and planting progress is behind normal. Severe flooding has put planting plans on hold in the Red River Valley of North Dakota and Minnesota.

Wheat stem rust. As of April 21, no wheat stem rust has been reported in the U.S. this year.

Wheat leaf rust. In Kansas, freeze conditions on April 12 and 13 damaged the head and stem but did not destroy all of the rust-infected leaves. Leaf rust development was set back somewhat by the freeze, but enough leaf rust survived to still cause significant losses in Kansas and provide inoculum for the wheat-growing areas farther north. Preliminary leaf rust model runs indicate an estimated 3-5% loss to rust in central Kansas.

Cool, wet conditions in many parts of Texas and Oklahoma during the past two weeks created good conditions for rust increase. Leaf rust was more severe in the central Texas nurseries at McGregor and Temple than at the two southern nurseries, Beeville and Uvalde. Eighty-percent severities were reported on flag leaves of TAM 200, TAM 107 and 2163 at the central Texas nurseries. In some fields of susceptible cultivars in central Texas, 40% severities were observed on the upper leaves at the soft dough stage, and losses to leaf rust are expected in these fields.

During mid-April, leaf rust was severe in plots of susceptible southern soft red winter wheat cultivars throughout the southeastern U.S., and many of the cultivars that previously were resistant are showing significant rust development this year.

During the third week in April, leaf rust was light in wheat fields in the San Joaquin Valley of California.

Race MBRL, which is virulent to *Lr1*, 3, 3ka, 10, 11, 30, and race TDBL, which is virulent to *Lr1*, 2a, 2c, 3, 10, 24, were identified from collections made in the Beeville, Texas nursery in mid-February.

Wheat stripe rust. Light wheat stripe rust was observed in nursery plots in the Skagit Valley of Washington during the third week in April.

Oat stem rust. During the second week in April, 50% oat stem rust severities were observed in varietal trial plots in southwestern Alabama. In southern Louisiana oat fields and plots, stem rust was increasing at a slow rate because of cool weather conditions.

Oat crown rust. In mid-April, crown rust was widespread from the southeastern U.S. to southern Texas, ranging from moderate to severe. In southeastern U.S. varietal plots, crown rust was severe (>80%), while in oat fields, crown rust was moderate (1-20%). This widespread crown rust development is equal to the rust development of the last three years in the southern U.S. These southern areas of severe crown rust development may provide inoculum for areas farther north.

Barley stem rust. As of April 21, no barley stem rust has been reported in the U.S. this year. Limited amounts of barley are grown commercially in the southern states. Stem rust on barley rarely occurs in this area.

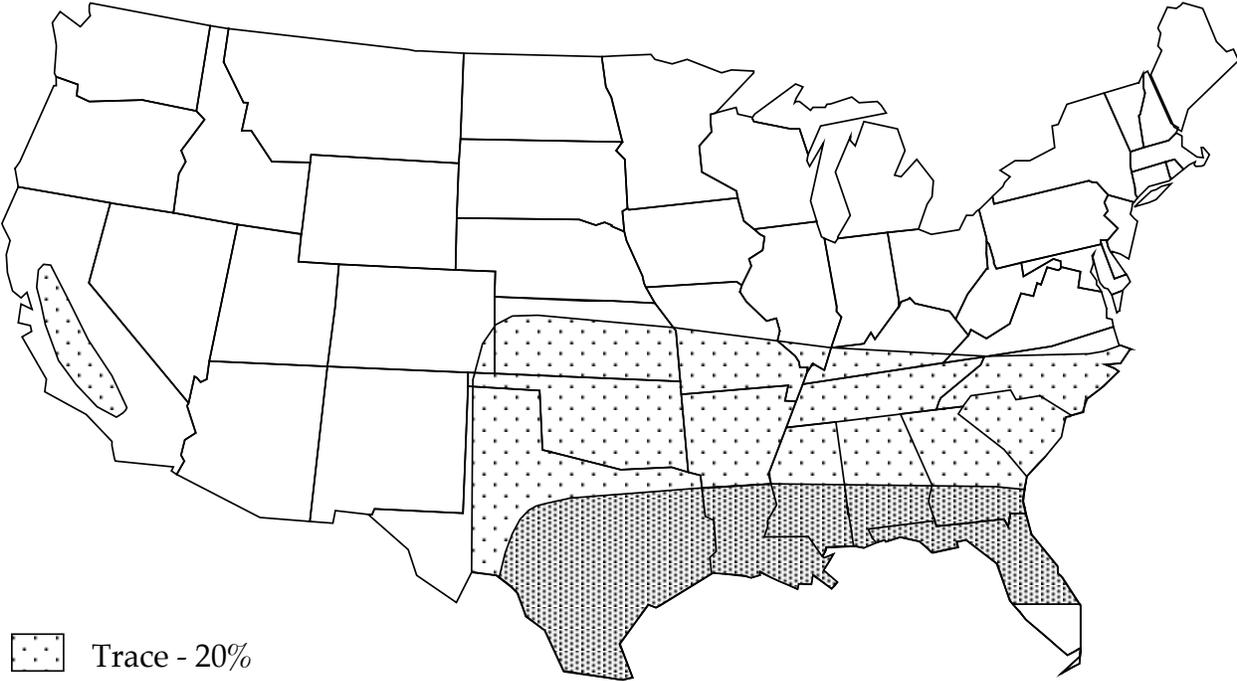
Barley leaf rust. There have been no new reports of barley leaf rust since the last bulletin.

Stripe rust on barley. During the second week in April, barley stripe rust was present in light to severe amounts in commercial fields in the San Joaquin Valley of California. In some fields, the infections were lighter than 1996, but in other fields, 20% severities were observed on flag leaves. It was observed that even under dry conditions, barley stripe rust was increasing. In mid-April, barley was heavily infected with stripe rust in winter trial plots in northwestern Oregon at Corvallis.

Rye rusts. There have been no new reports of rye rust since the last bulletin.

Other rusts. During the first week in April, severe crown rust was observed on ryegrass and little barley (*Hordeum pusillum*) in southern Alabama and Louisiana.

Fig. 1. Leaf rust severities in wheat fields on April 22, 1997



 Trace - 20%

 Severe (>20%)